

Flame Retardant, Sunlight Resistant

90 °C / 300 V

Single & Multi-Pair, XLPE-Insulation, Collective Screen, Armour, PVC-Sheath

RE-2X(St)YQY-fi

Application

For transmission of analogue and digital signals in instrument and control systems; allowed for use in zone 1 and zone 2 group II classified areas (IEC 60079-14); not allowed for direct connection to low impedance source, e.g. the public mains electricity supply. Recommended for indoor and outdoor installation, on racks, trays, in conduits, in dry and wet locations; for direct burial.

Construction

Conductor.....	plain annealed copper wire, stranded, size: 0.5 mm ² , 0.75 mm ² , 1 mm ² , 1.3 mm ² , 1.5 mm ² , 2.5 mm ²
Insulation.....	cross-linked polyethylene XLPE
Colour code.....	black / white, continuously numbered on white core (1, 2, 3..) for multi-element
Wrapping.....	at least 1 layer of plastic tape
Collective screen.....	24 µm aluminium / PETP tape over tinned copper drain wire, 0.5 mm ²
Inner sheath.....	polyvinyl chloride PVC, black
Armour.....	galvanised steel wire braid, opt. coverage 80% (min.)
Outer sheath.....	polyvinyl chloride PVC, black, blue for intrinsically safe systems
Cable marking.....	LEONI KERPEN ICON INSTRUMENTATION CABLE SIZE 300V RP EN 50288-7 CE PRODUCTION LOT CODE LENGTH MARKING



Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200

Temperature range	-30°C up to +90°C (during operation) -5°C up to +50°C (during installation)
Minimum bending radius	10 x cable diameter

Abbreviations

RE-	Instrumentation Cable
2X	XLPE insulation
(St)	collective screen
Y	PVC inner sheath
Q	steel wire braid
Y	PVC outer sheath
-fi	reduced flame propagation

Electrical Properties at 20 °C

		nom.	mm ²	0.5	0.75	1	1.3	1.5	2.5
Conductor cross-section									
Conductor resistance	max.		Ω/km	36.7	25.0	18.5	14.2	12.3	7.6
Insulation resistance	min.		MΩ x km	5000					
Mutual capacitance single element:	max.		nF/km	115	115	115	115	115	115
2 to 4 elements:				90	90	90	102	102	
above 4 elements:				75	75	75	85	85	
Inductance	max.		mH/km	1					
Capacitance unbalance	max.		pF/500 m	500					
L/R ratio	max.		µH/Ω	25			40		60
Test voltage U _{rms} (core : core)			V	1500					
Test voltage U _{rms} (core : screen)			V	1500					
Operating voltage			V	300					

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Geometrical data								
No. of elements	RT of insulation nom. (mm)	RT of inner sheath nom. (mm)	Dia. over inner sheath approx. (mm)	Dia. of armour wire nom. (mm)	RT of outer sheath nom. (mm)	Outer dia. approx. (mm)	Weight approx. (kg/km)	Part No. Colour black
0.5 mm²/7								
1	0.35	0.8	5.2	0.3	1.3	9.1	123	LKX7331E0010000
4	0.35	1.0	9.0	0.3	1.4	13.1	235	LKX7331E0070000
12	0.35	1.2	13.7	0.3	1.5	18.0	437	LKX7331E0190000
0.75 mm²/7								
1	0.38	0.8	5.6	0.3	1.3	9.5	135	LKX7331E0310000
4	0.38	1.0	10.0	0.3	1.4	14.1	272	LKX7331E0370000
12	0.38	1.2	15.3	0.3	1.6	19.8	537	LKX7331E0490000
1 mm²/7								
1	0.40	0.9	6.3	0.3	1.3	10.2	153	LKX7331E0610000
4	0.40	1.1	11.1	0.3	1.4	15.2	318	LKX7331E0670000
12	0.40	1.3	17.0	0.3	1.6	21.5	643	LKX7331E0790000
1.3 mm²/7								
1	0.45	0.9	6.8	0.3	1.3	10.7	169	LKX7331E0910000
4	0.45	1.1	12.2	0.3	1.5	16.5	374	LKX7331E0970000
12	0.45	1.4	19.1	0.3	1.7	23.8	169	LKX7331E1090000
1.5 mm²/7								
1	0.45	0.9	7.1	0.3	1.3	11.0	181	LKX7331E1210000
4	0.45	1.1	12.7	0.3	1.5	17.0	402	LKX7331E1270000
12	0.45	1.4	19.9	0.3	1.7	24.6	856	LKX7331E1390000
2.5 mm²/7								
1	0.55	0.0	0.0	0	0.0	0.0	0	LKX7331E9550000

RT = Radial Thickness